

ABSTRACT

A coreless linear motor and a canned linear motor that can significantly reduce an increase in surface temperature of a linear motor armature are provided.

In a magnetic field system of a coreless linear motor 1a, two rows of permanent magnets 201a are disposed on the opposite sides in a magnetic field yoke 202, and an armature 101a is disposed so that armature coils 102a and 103a including a plurality of coil groups centrally wound in the magnetic field system having the two rows of permanent magnets are arranged in two rows. One end of the two rows of the armature coils 102a and 103a in a direction perpendicular to a direction of a magnetic gap between the two rows of permanent magnets branches into two parts, and the other end is arranged back-to-back. Further, the substrate 104a for connecting the coils is inserted into a gap between the two rows of the branching coils 102a and 103a. The armature coils 102a and 103a and the substrate 104a are integrally formed and fixed by mold resin 105.